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# Simulation facility will allow organizations to test designs before purchase, production

***by Sue Baker, Aeronautical Systems Center***

*WRIGHT-PATTERSON AFB, OHIO* — Aeronautical Systems Center and Air Force Research Laboratory took a virtual leap into the 21st century with the opening of their simulation and analysis facility. The new $7 million center will allow ASC to use computer models and simulation to design and test airplanes in cyberspace before money is spent and metal is bent.

SIMAF is owned by the Major Shared Resource Center, but is jointly operated by ASC and AFRL.

"SIMAF will enable researchers and acquisition specialists to test new ideas in their development stage and improve our research and development strategy focus," said Lt. Gen. Robert Raggio, commander of ASC. "We can answer the 'what if?' questions, and play with combinations of weapon systems at minimal cost. In short we will work many of the growing pains out of a weapon system before we send out the order for a prototype."

Using a mix of real-time, virtual and constructive simulations, SIMAF's researchers will be able to "cross-pollinate" their unique designs with hundreds of other U.S. government, academic and contractor researchers and facilities to produce the most cost-effective defense systems possible.

"The team from Wright-Patterson AFB will link up with the Navy and contribute a joint strike fighter element to Joint Expeditionary Force '99, a real-time experiment that employs both computer and real-life weapon systems," Raggio said. "It is the first theater-level simulation Wright-Patterson will play in, and will push this capability to its limits. But it also is an exciting opportunity, and only a harbinger of things to come."

The formal dedication party – consisting of Raggio; U.S. Representatives Tony Hall and David Hobson; and Maj. Gen. Richard Paul of the Air Force Research Laboratory – cut a "virtual ribbon" with computer-generated scissors to formally open the doors to SIMAF. The master of ceremonies for the ribbon-cutting was Paul Shahady, director of information technology at ASC.

Following the ribbon-cutting, more than 100 invited guests from the base, academia and industry toured the facility and viewed demonstrations, including one involving the JSF program, which began running classified simulations in the adjacent AFRL facility in June 1998, according to David Mittlesteadt, chief of requirements support, JSF Support Office.

"Since then, modeling and simulation experts from ASC, AFRL and other agencies have planned, conducted and analyzed a wide range of virtual simulations for JSF," Mittelsteadt said. "SIMAF has helped us orchestrate air-to-ground, virtual strike warfare environment and air-to-air, aircrew system advisory panel simulations to support development of the HSG operational requirements document."

Future projects scheduled at SIMAF for the calendar year 1999 include air-to-air and air-to-ground simulations, said David M. Rothery, director of SIMAF's integration division. **@**